



STATE OF TENNESSEE  
**DEPARTMENT OF ENVIRONMENT AND CONSERVATION**  
NASHVILLE, TENNESSEE 37243-0435

**BETSY L. CHILD**  
COMMISSIONER

**PHIL BREDESEN**  
GOVERNOR

December 1, 2004

The Honorable Phil Bredeesen  
Governor of Tennessee  
State Capitol  
Nashville, Tennessee 37243

Dear Governor Bredeesen:

The Petroleum Underground Storage Tank (UST) Advisory Committee met over the course of four months to advise the Department of Environment and Conservation concerning the insolvent UST fund. The Advisory Committee process has been instrumental in promoting an open and honest line of communication in sharing criticisms, expertise, ideas, and solutions. The attached report contains our recommendations concerning the revenues to the fund and the expenditures from the fund as directed by section 10 of Public Chapter 925 of 2004.

Thank you for your leadership in addressing the need of the Petroleum UST program. We look forward to achieving long-term solvency for the fund.

Best regards,

Betsy L. Child

BLC:rc

Attachment

cc: Advisory Committee Members  
Karen H. Stachowski, Deputy Commissioner  
Stanley R. Boyd, Director

# FINAL REPORT

## THE TENNESSEE PETROLEUM UNDERGROUND STORAGE TANK ADVISORY COMMITTEE ON THE PETROLEUM UNDERGROUND STORAGE TANK FUND



December 1, 2004

# THE PROBLEM

On July 1, 1988, the Tennessee Legislature established a fund to provide a comprehensive investigation and remediation mechanism to address the problems caused by releases from petroleum underground storage tanks (USTs). The fund also provides a mechanism to assist owners and operators in meeting the financial responsibility requirement of the federal government.

The problem facing the state is that the fund is insolvent. The 2004 actuarial report from Willis Risk Solutions of North America<sup>1</sup> indicates a negative fund balance of \$95.6 million as of June 30, 2004. This deficit includes a provision for future payments in the amount of \$132.1 million on the 1,078 open clean-up cases as of June 30, 2004.

Potential effects of an insolvent fund include environmental and economic impairment. Lack of funding to address petroleum contamination can lead to unusable water supply resources, fire and explosion hazards and produce long-term health effects.<sup>2</sup> Economic impairments may be evident in UST facility closures (i.e. local gas stations, mini-marts) due to the inability of the owners and operators to meet federal financial responsibility requirements and the inability to use land due to liability concerns associated with UST sites.

The fund in Tennessee has been successful in cleaning up and closing nearly 57% of the confirmed releases since July 1990. The cost of these clean-ups amount to \$212,367,000. Despite the progress, much work remains. As of June 30, 2004, there remains 1,078 confirmed releases listed as open and incurring costs on a daily basis and many involve

groundwater contamination. And despite improvements in tank system design and release detection methodologies, the U.S. Environmental Protection Agency reports that thousands of new petroleum leaks from USTs are discovered each year.<sup>3</sup>

Achieving and maintaining fund solvency presents a two-fold challenge to state officials and the regulated community. First, controlling expenditures is an important component in the financial stability of the fund. To this end, the department and stakeholders have begun a review of the efficiency and effectiveness of current department processes and protocols regarding clean-up of contaminated sites. Second, sustaining sufficient revenue presents a challenge to ensuring that resources are available to protect health and the environment from petroleum releases from USTs. The primary sources of revenue for the fund include an environmental assurance fee of four tenths of one cent (0.4) per gallon on each gallon of petroleum product imported into the state and petroleum products manufactured in Tennessee and a one hundred twenty-five dollar (\$125) per tank fee for each petroleum UST. Fund revenue has decreased since 1990 and a growing gap has existed between revenues and expenditures since 1997.

The state anticipates continued reliance on the fund for protection of human health, safety, and the environment and assistance to owners and operators in meeting financial responsibility requirements. For these reasons, Tennessee should continue to provide a mechanism to fund clean-ups.

<sup>1</sup> Available from the Division of Underground Storage Tanks

<sup>2</sup> U.S. Environmental Protection Agency, [www.epa.gov/oust/cat/index.htm](http://www.epa.gov/oust/cat/index.htm).

<sup>3</sup> U.S. Environmental Protection Agency, [www.epa.gov/oust/20comply.htm](http://www.epa.gov/oust/20comply.htm).

# THE CHARGE

Recognizing the importance of achieving and maintaining financial solvency for the Petroleum Underground Storage Tank (UST) fund, Governor Phil Bredesen on June 8, 2004, signed House Bill No. 3496, which became Public Chapter 925 and established the Tennessee Petroleum UST Advisory Committee to advise Commissioner Betsy L. Child concerning the Petroleum UST fund.

The advisory committee includes 12 members representing various stakeholders in the UST program, including the Tennessee Municipal League, Tennessee County

Highway Officials Association, environmental interests, Tennessee Trucking Association, Tennessee Oil Marketers Association, corrective action contractors and small, medium, and large tank owners.

The Commissioner's charge to the advisory committee: Deliver a set of recommendations on the future of the UST fund to Governor Bredesen and the Tennessee General Assembly no later than December 1, 2004. She said, "The recommendations will outline a path demonstrating how the state's UST program can achieve and maintain financial solvency and operational stability."



**Front Row:**  
Left to Right  
Dr. George Hyfantis  
Karen Stachowski  
Margaret Mahery  
Dr. John Smith  
Joey Cupp  
Marty Calloway  
Stan Boyd

**Back Row:**  
Left to Right  
John Walton  
Ron Belz  
Chuck Meek  
Danny Norrod  
Gary Douglas  
J. Rodney Carmical  
Betsy Child

# THE MEMBERS

**Ron Belz**

Belz Enterprises  
Memphis

**J. Rodney Carmical**

Tennessee County Highway  
Officials Association  
Nashville

**Gary Douglas**

Pilot Travel Centers, LLC  
Knoxville

**George Hyfantis**

Tennessee Environmental Council  
Knoxville

**Danny Norrod**

Twin Lakes Oil Company  
Livingston

**John Walton**

Averitt Express  
Cookeville

**Marty Calloway**

Calloway Oil Company  
Maryville

**Joey Cupp**

Pangean-CMD Associates, Inc.  
Knoxville

**Jimmy Hensley**

Cocke County Farmers' Co-op  
Newport

**Margaret Mahery**

Tennessee Municipal League  
Nashville

**Chuck Meek**

White Oak Shell  
Milledgeville

**John Smith**

UST Board Chairman  
Cordova

# THE APPROACH

The Petroleum Underground Storage Tank Advisory Committee examined the UST program and the fund over the course of four months of meetings held in Nashville, Tennessee. The advisory committee focused its review in three major areas:

- **Funding** (revenue and deductibles)
- **Compliance** (notification, operation, certification)
- **Cleanup** (site characterization and standards)

The advisory committee held its first meeting on August 4, 2004. By November 29, the advisory committee met a total of 6 times. A subcommittee was also convened to meet during this time period to review details of operational issues and report findings to the advisory committee. The subcommittee met a total of 4 times.

Interim measures were evaluated during subcommittee and advisory committee meetings then incorporated into the recommendations made in this report. Implementation of the interim measures are intended to result in a positive operational balance in the fund by June 30, 2007. However, there remains a large long-term liability of the fund not addressed by these interim measures. It is further intended that implementation of the interim measures will be evaluated during the next two years and long-term solutions will then be recommended.

The committee believes an approach incorporating operational changes will decrease the average cost-to-closure and will not require the full actuarial reserve of \$132.1 million. The advisory committee recognizes there is a difference between their approach and the August 2004 actuarial report.

To support the financial amounts in the recommendations, the advisory committee

evaluated the amount of money needed to have a positive operational balance. The committee evaluated the \$132.1 million deficit for the 1,078 open cases in the August 2004 actuarial report and also performed an independent analysis of the deficit. The advisory committee analysis was performed to provide a more accurate cost-to-closure estimate based on implementation of operational changes. Based on the current case management prioritization and maximum benzene concentrations, the committee determined the amount required to close out the 1,078 open cases would be \$115 million.

The actuarial report further projected 1,194 new releases from 2004 through 2012 with an associated cost-to-closure of \$140,000 per release. The projection was based on a straight cost-to-closure average from 1991 to 2004. The advisory committee performed an independent analysis and calculated a cost-to-closure for new releases based on a weighted average of the costs from 1992 to 2004. This weighted average assigned ten percent to costs incurred by the fund from 1991 to 1995, seventy percent to costs incurred by the fund from 1996 to 2002, and twenty percent to costs incurred by the fund from 2003 to 2004. The advisory committee supports use of a weighted average cost-to-closure per site of \$102,000 for new releases. This results in a reduction of \$46 million dollars from 2004 to 2012.





# THE RECOMMENDATIONS

At the conclusion of its review, the Petroleum Underground Storage Tank (UST) Advisory Committee approved recommendations for statutory changes plus additional regulatory and operational changes to provide an effective strategy to achieve operational stability.

## **I. Statutory Changes and Evaluation**

### **Fund Revenues**

Currently, T.C.A. § 68-215-109(a) caps the annual tank fee at \$125 per year per tank. To increase annual fund revenues, an Act to amend Title 68, Chapter 215 relative to petroleum underground storage tanks should be introduced during the next legislative session to modify the cap on the annual tank fee.

To ensure operational stability, the advisory committee recommends an increase in the annual fee to \$250 per compartment for all tanks.

The Act to amend should also provide an exception that in the case of compartmentalized tanks, the fee be charged per compartment and provide the Board authority to revise the fee amounts in the future, not to exceed the fee amount set by the legislature of \$300.

It is anticipated that the fee and deductible changes will create a positive operational balance in the fund by June 2007. However, there remains a large long-term liability of the fund not addressed by these interim measures. Therefore, the positive fund balance at the end of 2007 is not an indicator for the board to reduce fees, because long-term solvency has not been achieved.

### **Deductibles**

Currently, T.C.A. § 68-215-111(e) establishes deductibles for fund reimbursement per site per occurrence based on the number of

tanks owned in the state by the tank owner. An Act to amend Title 68, Chapter 215 relative to petroleum underground storage tanks should be introduced during the next legislative session to revise the deductibles for cleanups and for third party claims to a \$20,000 deductible.

The Act to amend should also provide the Board authority to revise the cleanup and third party claim deductibles in the future, not to exceed the deductible amount set by the legislature of \$30,000.

### **Incentives**

To prevent releases from petroleum UST systems and reduce risk to the fund, the advisory committee recommends inclusion of flexible statutory language that would allow for regulatory development and application of incentives, such as lowering deductibles for compliance and/or use of best management practices. Such decisions shall be protective of the financial solvency of the fund.

### **2002 Amendment**

The 2002 amendment to the Act allowing the tank owner to pay past fees and regain coverage under the fund should be removed. Since the amendment was made, it has impacted the fund by \$540,000. The Act to amend should also provide that the fund is available for tanks that have paid all fees timely since 1998 or have reestablished fund eligibility by following the procedures in the UST rules.

### **Landowner Notification**

Currently, landowners and other persons with property ownership interests in real property on which tanks are located do not have a mechanism for receiving notification of loss of

# THE RECOMMENDATIONS

fund eligibility. An Act to amend Title 68, Chapter 215 relative to petroleum underground storage tanks should be introduced during the next legislative session to allow creation of a voluntary registry to provide landowners and other persons with property ownership interests a mechanism to receive a copy of notifications from the department to the owners/operators of the facility at the site, including notices of tank fees, notices of violations, and notices of loss of fund eligibility. To defray the costs of administering the registry, the Act to amend should include a provision for charging a fee of \$500 to the registry applicant. This provision should include Board authority to revise the fee in the future, not to exceed the amount set by the legislature of \$750.

The Act to amend should also make clear that the landowner has the same right to cure the non-compliance as the owner and operator.

## **Criminal Sanctions**

Currently, T.C.A. § 68-215-120(b) provides that any person who knowingly causes or allows a release of petroleum into the environment in violation of the act or rules commits a class E felony or a higher level of felony based on the damages that result. However, these felonies are punishable by fine only. In order to increase the deterrent effect of this criminal provision, the proposed legislation should add incarceration to the criminal sanctions in this section. The Act to amend should also add specific language “who knowingly tampers with or disables a release detection or prevention device associated with an underground storage tank” to identify tampering with release detection as a crime since it poses risk to the fund by allowing a release to go undetected.

## **State-Owned Tanks**

Currently, T.C.A. § 68-215-111 allows state-owned tanks to receive reimbursement from the fund or coverage for third party claims. An Act to amend Title 68, Chapter 215 relative to petroleum underground storage tanks should be introduced during the next legislative session to prohibit state-owned tanks from receiving reimbursement from the fund or coverage for third party claims.

## **Certification of Installers and Service Providers**

Currently installers and service providers of UST systems are not required by law to be certified. To prevent releases from improper UST system installations and/or service, an Act to amend Title 68, Chapter 215 relative to petroleum underground storage tanks should be introduced during the next legislative session to require that all installers and service providers of UST systems be certified. The Act to amend should also provide the Board authority to craft the certification process through promulgation of rules. To defray the costs of administering a certification program, the Act to amend should include a provision for charging a fee to program applicants.

## **Certification of Owners or Operators**

Currently owners or operators of UST systems are not required by law to be certified. To prevent releases from improper operation of UST systems, an Act to amend Title 68, Chapter 215 relative to petroleum underground storage tanks should be introduced during the next legislative session to require that all UST



# THE RECOMMENDATIONS

systems have a certified operator. An Act to amend should also provide the Board authority to craft the certification process through promulgation of rules. To defray the costs of administering a certification program, an Act to amend should include a provision for charging a fee to program applicants.

## **Fund Protection**

To protect the fund from monetary diversions for purposes other than those related to the regulation of underground storage tanks, an Act to amend Title 68, Chapter 215 should include a requirement to prohibit fund diversions.

## **Extension of Advisory Committee**

Currently the Advisory Committee sunsets on June 30, 2005. An Act to amend Title 68, Chapter 215 should include an extension of the advisory committee until June 30, 2007.

## **Statutory Changes Evaluation**

To evaluate projected increased revenue and reduction in liabilities from implementation of statutory changes, an actuarial study should be performed in 2006 and in years planned thereafter. Until such time as actuarial studies are performed, the department should monitor the impact of all statutory changes and update the Governor on the related

increased revenue and reduction in liabilities. At the end of the evaluation period, the advisory committee and the department should also consider legislative changes for 2007, to effectuate a long-term solution to the solvency of the fund.

## **II. Regulatory Changes and Evaluation**

### **Annual Fees**

To incorporate and/or implement the statutory changes and/or directives recommended regarding tank fees, rules should be promulgated. Any surplus should be protected from diversion for purposes other than those related to the regulation of underground storage tanks.

### **Deductibles**

To incorporate and/or implement the statutory changes and/or directives recommended regarding deductibles, rules should be promulgated.

### **Incentives**

To incorporate and/or implement the statutory changes and/or directives recommended regarding incentives, rules should be promulgated. Best management practices should be defined in the promulgated rules.

# THE RECOMMENDATIONS

## **Landowner Notification**

To incorporate and/or implement the statutory changes and/or directives recommended regarding landowner notification, rules should be promulgated.

## **Certification of Installers and Service Providers**

To incorporate and/or implement the statutory changes and/or directives recommended regarding certification of installers and service providers, rules should be promulgated. The rules should be flexible enough to incorporate use of a state-developed program or use of an already existing program approved and/or officially recognized by the state.

## **Certification of Owners or Operators**

To incorporate and/or implement the statutory changes and/or directives recommended regarding certification of owners or operators, rules should be promulgated. The rules should be flexible enough to incorporate use of a state-developed program or use of an already existing program approved and/or officially recognized by the state. The rules should also be flexible enough to allow an option for the tank owner entity to have an internal certified operator or obtain an external certified operator responsible for their UST system(s). The rules should contain language that states a certified operator may be responsible for multiple systems up to a defined effective responsibility measure.

## **Risk-Based Cleanup Standards**

To ensure the fund is available for expenditures for the purpose of providing for the investigation, identification, and for the reasonable and safe cleanup of petroleum sites, regulatory changes should be promulgated to establish risk-based cleanup standards.

## **Regulatory Changes Evaluation**

Upon statutory and operational evaluation, the department should also review promulgated rules for changes necessary to support actions taken as a result of those evaluations.



# THE RECOMMENDATIONS

## III. Operational Changes and Evaluation

### **Annual Fees**

Guidance should be given to the Board regarding performance of a periodic analysis of the fund balance. This analysis should be used to evaluate raising or lowering tank fees within the amount set by the legislature to ensure operational stability of the fund and protect any surplus.

### **Incentives**

The division should evaluate best management practices and make recommendations to the Board for the application of incentives.

### **Initial Site Characterization**

To ensure the fund is available for expenditures for the purpose of providing for the investigation, identification, and for the reasonable and safe cleanup of petroleum sites, current regulatory flexibility should be utilized to establish risk-based cleanup standards in the Initial Site Characterization phase of corrective action. Guidance should be developed to apply risk-based cleanup standards/site-specific standards to historic sites and to utilize risk-based screening standards in accordance with current flexibility by February 2005.

### **Risk-Based Cleanup Standards**

After the UST board promulgates rules in 2005 establishing risk-based clean-up standards, the Department should develop guidance to apply those risk-based standards to all contaminated sites.

### **Fund Management**

To ensure the fund maintains the required minimum balance and to ensure the proper management of sites on a statewide basis, a management tool for pre-approval of costs should be developed and implemented.

### **Operational Changes Evaluation**

The operational changes should be developed and implemented during the next twelve to eighteen month period. To evaluate the projected reduction in liabilities from implementation of operational changes, an actuarial study should be performed in 2006. Until such time as the actuarial study is performed, the department should monitor the impact of all operational changes and update the Governor on the related reduction in liabilities. The department should continually consider other operational changes.

# ACKNOWLEDGEMENTS

**Representative John C. Tidwell**

Secretary, House Conservation and  
Environment Committee  
New Johnsonville

**Edna Holland**

Tennessee Municipal League  
Nashville

**Scott Thomas**

Bass, Berry & Sims PLC  
Nashville

**Gregory N. Alff**

Willis Risk Solutions North America  
Nashville

**Thomas Nielson**

Warren Rogers Associates, Inc.  
Provo, UT

**Marylee Booth**

Executive Director, Tennessee Oil  
Marketers Association  
Nashville

**Emily LeRoy**

Associate Director, Tennessee Oil  
Marketers Association  
Nashville

**Ronald Prater**

UST Board Member  
Nashville

**Michael B. Gunn**

Willis Risk Solutions North America  
Nashville

# STAFF

The Tennessee Petroleum Underground Storage Tank Advisory Committee gratefully acknowledges the entire Division of Underground Storage Tanks staff as well as the following individuals for their assistance and support:

**Betsy L. Child**, Commissioner  
Tennessee Department of Environment  
and Conservation

**Larry Lance**, Assistant Commissioner  
Tennessee Department of Environment  
and Conservation

**Ryan Swindell**, Legislative Liaison  
Tennessee Department of Environment  
and Conservation

**Theresa Denton**, Environmental Legal  
Counsel  
Tennessee Department of Environment  
and Conservation

**Donna Washburn**, Deputy Director  
Tennessee Division of Underground  
Storage Tanks

**Cindy Greene**, Environmental  
Protection Specialist  
Tennessee Division of Underground  
Storage Tanks

**Karen Stachowski**, Deputy Commissioner  
Tennessee Department of Environment and  
Conservation

**Tim Schwarz**, Legislative Liaison  
Tennessee Department of Environment and  
Conservation

**Alan Leiserson**, Legal Services Director  
Tennessee Department of Environment and  
Conservation

**Stan Boyd**, Director  
Tennessee Division of Underground Storage  
Tanks

**Michael Langreck**, Environmental  
Protection Specialist  
Tennessee Division of Underground Storage  
Tanks

**Debbie Mann**, Interim Special Projects  
Coordinator  
Tennessee Department of Environment and  
Conservation